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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/006,922

DATE: 02/26/2002
TIME: 09:35:40

Input Set : N:\Crf3\Datahold\EFS\10006922\SEQUENCELISTING.txt
Output Set: N:\CRF3\02262002\J006922.raw

3 <110> APPLICANT: Lukyanov, Sergey A
4 Fradkov, Arcady F.
5 Labas, Yulii A.
6 Matz, Mikhail V.
7 Terskikh, Alexey
9 <120> TITLE OF INVENTION: Novel Chromophores/Fluorophores and
10 Methods for Using the Same
13 <130> FILE REFERENCE: CLON-035CIP
14 <140> CURRENT APPLICATION NUMBER: US/10/006,922
15 <141> CURRENT FILING DATE: 2001-12-04
16 <150> PRIOR APPLICATION NUMBER: 09/120,330
19 <151> PRIOR FILING DATE: 1998-12-11
21 <150> PRIOR APPLICATION NUMBER: 09/457,898
22 <151> PRIOR FILING DATE: 1999-12-09
24 <150> PRIOR APPLICATION NUMBER: 09/458,144
25 <151> PRIOR FILING DATE: 1999-12-09
27 <150> PRIOR APPLICATION NUMBER: 09/458,477
28 <151> PRIOR FILING DATE: 1999-12-09
30 <150> PRIOR APPLICATION NUMBER: 09/457,556
31 <151> PRIOR FILING DATE: 1999-12-09
33 <150> PRIOR APPLICATION NUMBER: 09/444,338
34 <151> PRIOR FILING DATE: 1999-11-19
36 <160> NUMBER OF SEQ ID NOS: 46
38 <170> SOFTWARE: FastSEQ for Windows Version 4.0
40 <210> SEQ ID NO: 1
41 <211> LENGTH: 687
42 <212> TYPE: DNA
43 <213> ORGANISM: anemonia majano
45 <400> SEQUENCE: 1
46 atggctctt caaacaagtt tattcgagat gacatgaaaa tgacctacca tatggatggc 60
47 tttgtcaatg ggcattactt taccgtcaaa ggtgaaggca acgggaagcc atacgaaggg 120
48 acgcagacct cgactttaa agtcaccatg gccaacggtg ggcccttgc attctccctt 180
49 gacatactat ctacagtgtt caagtatgga aatcgatgt ttactgcgtt tcctaccagt 240
50 atgcccgaact atttcaaaca agcatttcct gacggaatgt catatgaaag gactttacc 300
51 tatgaagatg gaggagttgc tacagccagt tggaaataa gccttaaagg caactgcattt 360
52 gagcacaat ccacgtttca tggagtgaac ttccctgctg atggacctgt gatggcgaag 420
53 atgacaactg gttgggaccc atcttttagg aaaatgactg tctgcgtatgg aatattgaag 480
54 ggtgatgtca ccgcgttccat gatgtgcaa ggaggtggca attacagatg ccaattccac 540
55 acttcttaca agacaaaaaa accggtgacg atgccaccaa accatgcggg ggaacatcgc 600
56 attgcgagga ccgaccttga caaagggtggc aacagtgttc agctgacggg gcacgcgttt 660
57 gcacatataa cctctgttgc ccctttc 687
59 <210> SEQ ID NO: 2
60 <211> LENGTH: 229

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Output Set: N:\CRF3\02262002\J006922.raw

61 <212> TYPE: PRT
62 <213> ORGANISM: anemonia majano
64 <400> SEQUENCE: 2
65 Met Ala Leu Ser Asn Lys Phe Ile Gly Asp Asp Met Lys Met Thr Tyr
66 1 5 10 15
67 His Met Asp Gly Cys Val Asn Gly His Tyr Phe Thr Val Lys Gly Glu
68 20 25 30
69 Gly Asn Gly Lys Pro Tyr Glu Gly Thr Gln Thr Ser Thr Phe Lys Val
70 35 40 45
71 Thr Met Ala Asn Gly Gly Pro Leu Ala Phe Ser Phe Asp Ile Leu Ser
72 50 55 60
73 Thr Val Phe Lys Tyr Gly Asn Arg Cys Phe Thr Ala Tyr Pro Thr Ser
74 65 70 75 80
75 Met Pro Asp Tyr Phe Lys Gln Ala Phe Pro Asp Gly Met Ser Tyr Glu
76 85 90 95
77 Arg Thr Phe Thr Tyr Glu Asp Gly Gly Val Ala Thr Ala Ser Trp Glu
78 100 105 110
79 Ile Ser Leu Lys Gly Asn Cys Phe Glu His Lys Ser Thr Phe His Gly
80 115 120 125
81 Val Asn Phe Pro Ala Asp Gly Pro Val Met Ala Lys Met Thr Thr Gly
82 130 135 140
83 Trp Asp Pro Ser Phe Glu Lys Met Thr Val Cys Asp Gly Ile Leu Lys
84 145 150 155 160
85 Gly Asp Val Thr Ala Phe Leu Met Leu Gln Gly Gly Asn Tyr Arg
86 165 170 175
87 Cys Gln Phe His Thr Ser Tyr Lys Thr Lys Lys Pro Val Thr Met Pro
88 180 185 190
89 Pro Asn His Ala Val Glu His Arg Ile Ala Arg Thr Asp Leu Asp Lys
90 195 200 205
91 Gly Gly Asn Ser Val Gln Leu Thr Glu His Ala Val Ala His Ile Thr
92 210 215 220
93 Ser Val Val Pro Phe
94 225
97 <210> SEQ ID NO: 3
98 <211> LENGTH: 1116
99 <212> TYPE: DNA
100 <213> ORGANISM: Clavularia species
102 <220> FEATURE:
103 <221> NAME/KEY: misc_feature
104 <222> LOCATION: 8, 12, 13, 17, 65, 77, 102, 104
105 <223> OTHER INFORMATION: n = A,T,C or G
107 <400> SEQUENCE: 3
W--> 108 tatagganca tnngggngat tggggtccaa agcattgtaa ccaacgcaga taaccccccag 60
W--> 109 tggtnntcaaa cgcaganaac gcgggaacat tggaaaattg antnttaagg aggcaaggaa 120
110 tcgggagata agttgcgaga aactgaaaaa atgaagtgtta aattttgtgtt ctgcctgtcc 180
111 ttcttggtcc tcgccccatcac aaacgcgaac attttttga gaaacgaggg tgacttagaa 240
112 gagaagacat tgagaataacc aaaagctcta accaccatgg gtgtgattaa accagacatg 300
113 aagattaagc tgaagatgga aggaaatgtta aacgggcattg cttttgtgtat cgaaggagaa 360
114 ggagaaggaa agccttacga tgggacacac actttaaacc tggaaagtcaa ggaaggtgcg 420

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Input Set : N:\Crf3\Datohold\EFS\10006922\SEQUENCELISTING.txt
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115 cctctgcctt tttcttacga tatcttgca aacgcgttcc agtacggaaa cagagcattg 480
 116 acaaaaatacc cagacgatata agcagactat ttcaagcagt cgtttcccgaa gggatattcc 540
 117 tggggaaagaa ccatgacttt tgaagacaaa ggcattgtca aagtggaaaag tgacataagc 600
 118 atggaggaaag actccctttat ctatgaaatt cggtttgtat ggtatgaactt tcctcccaat 660
 119 ggtccgggta tgcagaaaaa aactttgaag tgggaaccat ccactgagat tatgtacgtg 720
 120 cgtgatggag tgctggcgg agatattagc cattctctgt tgctggaggg aggtggccat 780
 121 taccgatgtg acttcaaaaag tatttacaaa gcaaaaaaaag ttgtcaatt gccagactat 840
 122 cactttgtgg accatcgcatt tgagatctt aaccatgaca aggattacaa caaagtaacg 900
 123 ctgtatgaga atgcagttgc tcgcttattct ttgctgccaa gtcaggccta gacaacaagg 960
 124 atactgaaaaa catatttgtc tgagggtttg tggtgtttt taaaagacat cagctcagca 1020
 125 ttctgttagtt gtaacaaaaa atagcttaa tttttggtgg gattaaatca tagggatttg 1080
 126 ttttagtaat cattttgctt aataaaaagt gccttg 1116
 128 <210> SEQ ID NO: 4
 129 <211> LENGTH: 266
 130 <212> TYPE: PRT
 131 <213> ORGANISM: Clavularia species
 133 <400> SEQUENCE: 4
 134 Met Lys Cys Lys Phe Val Phe Cys Leu Ser Phe Leu Val Leu Ala Ile
 135 1 5 10 15
 136 Thr Asn Ala Asn Ile Phe Leu Arg Asn Glu Ala Asp Leu Glu Glu Lys
 137 20 25 30
 138 Thr Leu Arg Ile Pro Lys Ala Leu Thr Thr Met Gly Val Ile Lys Pro
 139 35 40 45
 140 Asp Met Lys Ile Lys Leu Lys Met Glu Gly Asn Val Asn Gly His Ala
 141 50 55 60
 142 Phe Val Ile Glu Gly Glu Gly Lys Pro Tyr Asp Gly Thr His
 143 65 70 75 80
 144 Thr Leu Asn Leu Glu Val Lys Glu Gly Ala Pro Leu Pro Phe Ser Tyr
 145 85 90 95
 146 Asp Ile Leu Ser Asn Ala Phe Gln Tyr Gly Asn Arg Ala Leu Thr Lys
 147 100 105 110
 148 Tyr Pro Asp Asp Ile Ala Asp Tyr Phe Lys Gln Ser Phe Pro Glu Gly
 149 115 120 125
 150 Tyr Ser Trp Glu Arg Thr Met Thr Phe Glu Asp Lys Gly Ile Val Lys
 151 130 135 140
 152 Val Lys Ser Asp Ile Ser Met Glu Glu Asp Ser Phe Ile Tyr Glu Ile
 153 145 150 155 160
 154 Arg Phe Asp Gly Met Asn Phe Pro Pro Asn Gly Pro Val Met Gln Lys
 155 165 170 175
 156 Lys Thr Leu Lys Trp Glu Pro Ser Thr Glu Ile Met Tyr Val Arg Asp
 157 180 185 190
 158 Gly Val Leu Val Gly Asp Ile Ser His Ser Leu Leu Leu Glu Gly Gly
 159 195 200 205
 160 Gly His Tyr Arg Cys Asp Phe Lys Ser Ile Tyr Lys Ala Lys Lys Val
 161 210 215 220
 162 Val Lys Leu Pro Asp Tyr His Phe Val Asp His Arg Ile Glu Ile Leu
 163 225 230 235 240
 164 Asn His Asp Lys Asp Tyr Asn Lys Val Thr Leu Tyr Glu Asn Ala Val
 165 245 250 255

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166 Ala Arg Tyr Ser Leu Leu Pro Ser Gln Ala
167 260 265
170 <210> SEQ ID NO: 5
171 <211> LENGTH: 693
172 <212> TYPE: DNA
173 <213> ORGANISM: Zoanthus species
175 <400> SEQUENCE: 5
176 atggctcagt caaaggcacgg tctaaacaaaa gaaatgacaa taaaataccg tatggaaggg 60
177 tgcgtcgatg gacataaatt tggatcagc ggagagggca ttggatatcc gttcaaaggg 120
178 aaacaggcta ttaatctgtg tgggtcgaa ggtggaccat tgccatttgc cgaagacata 180
179 ttgtcagctg cctttatgtc cgaaaacagg gtttcaactg aatatcctca agacatagct 240
180 gactatttca agaactcggt tcctgctgtatacatggg acaggcttt tctctttgag 300
181 gatggagcag tttgcataatg taatgcagat ataacagtga gtgttgaaga aaactgcgtg 360
182 tatcatgagt ccaaattttt tggagtgaat tttctgtgt atggacctgt gatgaaaaag 420
183 atgacagata actgggagcc atcctgcgag aagatcatac cgtaccta gcaggggata 480
184 ttgaaagggg atgtctccat gtacctcctt ctgaaggatg gtggcggtt acgggtccaa 540
185 ttgcacacag tttacaaaggc aaagtctgtg ccaagaaaga tgccggactg gcacttcata 600
186 cagcataagg tcacccgtga agaccgcgc gatgctaaga atcagaaatg gcacatgtaca 660
187 gaacatgttgcattccgg atctgcatttccc 693
189 <210> SEQ ID NO: 6
190 <211> LENGTH: 231
191 <212> TYPE: PRT
192 <213> ORGANISM: Zoanthus species
194 <400> SEQUENCE: 6
195 Met Ala Gln Ser Lys His Gly Leu Thr Lys Glu Met Thr Met Lys Tyr
196 1 5 10 15
197 Arg Met Glu Gly Cys Val Asp Gly His Lys Phe Val Ile Thr Gly Glu
198 20 25 30
199 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Ala Ile Asn Leu Cys Val
200 35 40 45
201 Val Glu Gly Gly Pro Leu Pro Phe Ala Glu Asp Ile Leu Ser Ala Ala
202 50 55 60
203 Phe Asn Tyr Gly Asn Arg Val Phe Thr Glu Tyr Pro Gln Asp Ile Ala
204 65 70 75 80
205 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Asp Arg Ser
206 85 90 95
207 Phe Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Ala Asp Ile Thr
208 100 105 110
209 Val Ser Val Glu Glu Asn Cys Met Tyr His Glu Ser Lys Phe Tyr Gly
210 115 120 125
211 Val Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Asp Asn
212 130 135 140
213 Trp Glu Pro Ser Cys Glu Lys Ile Ile Pro Val Pro Lys Gln Gly Ile
214 145 150 155 160
215 Leu Lys Gly Asp Val Ser Met Tyr Leu Leu Lys Asp Gly Gly Arg
216 165 170 175
217 Leu Arg Cys Gln Phe Asp Thr Val Tyr Lys Ala Lys Ser Val Pro Arg
218 180 185 190
219 Lys Met Pro Asp Trp His Phe Ile Gln His Lys Leu Thr Arg Glu Asp

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220 195 200 205
221 Arg Ser Asp Ala Lys Asn Gln Lys Trp His Leu Thr Glu His Ala Ile
222 210 215 220
223 Ala Ser Gly Ser Ala Leu Pro
224 225 230
227 <210> SEQ ID NO: 7
228 <211> LENGTH: 865
229 <212> TYPE: DNA
230 <213> ORGANISM: Zoanthus species
232 <400> SEQUENCE: 7
233 gagttgagtt tctcgacttc agttgtatca attttgggc atcaagcgat ctattttcaa 60
234 catggctcat tcaaaggc acg gtctaaaaga agaaatgaca atgaaatacc acatggagg 120
235 gtgcgtcaac ggacataaaat ttgtgatcac gggcgaaggc attggatatac cgttcaaagg 180
236 gaaacagact attaatctgt gtgtgatcga agggggacca ttgccattt ccgaagacat 240
237 attgtcact ggcttaagt acggagacag gattttcaact gaatatccctc aagacatagt 300
238 agactatcc aagaactcgt gtcctgtgg atatacatgg ggcaggtctt ttctctttga 360
239 ggatggagca gtcgtcatat gcaatgtaga tataacagtg agtgtcaaag aaaactgcatt 420
240 ttatcataag agcatatatta atggaatgaa ttttcgtgt gatggacccgt tgatgaaaaaa 480
241 gatgacaact aactggaaag catcctgcga gaagatcatg ccagtaccta agcaggggat 540
242 actgaaaggg gatgtctcca tgtacccctc tctgaaggat ggtgggcgtt accgggtccca 600
243 gttcgacaca gtttacaaag caaatgtgt gccaagtaag atgcccggagt ggcacttcat 660
244 ccagcataag ctcctccgtg aagaccgcag cgatgctaaat aatcagaagt ggcagctgac 720
245 agagcatgtc attgcattcc ttctgcctt ggctgtataa gaatgttagtt ccaacatttt 780
246 aatgcattgtc cttgtcaattt attctgtataa aaatgttagtt gagttgaaaaa cagacaagta 840
247 caaataaaagc acatgttaat cgtct 865
249 <210> SEQ ID NO: 8
250 <211> LENGTH: 230
251 <212> TYPE: PRT
252 <213> ORGANISM: Zoanthus species
254 <400> SEQUENCE: 8
255 Met Ala His Ser Lys His Gly Leu Lys Glu Glu Met Thr Met Lys Tyr
256 1 5 10 15
257 His Met Glu Gly Cys Val Asn Gly His Lys Phe Val Ile Thr Gly Glu
258 20 25 30
259 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Thr Ile Asn Leu Cys Val
260 35 40 45
261 Ile Glu Gly Gly Pro Leu Pro Phe Ser Glu Asp Ile Leu Ser Ala Gly
262 50 55 60
263 Phe Lys Tyr Gly Asp Arg Ile Phe Thr Glu Tyr Pro Gln Asp Ile Val
264 65 70 75 80
265 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Gly Ser Phe
266 85 90 95
267 Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Val Asp Ile Thr Val
268 100 105 110
269 Ser Val Lys Glu Asn Cys Ile Tyr His Lys Ser Ile Phe Asn Gly Met
270 115 120 125
271 Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Thr Asn Trp
272 130 135 140
273 Glu Ala Ser Cys Glu Lys Ile Met Pro Val Pro Lys Gln Gly Ile Leu

VERIFICATION SUMMARY

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Input Set : N:\Crf3\Datahold\EFS\10006922\SEQUENCELISTING.txt
Output Set: N:\CRF3\02262002\J006922.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application Number
L:108 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3